



The Fertilizer Association of Ireland

What can I do about high fertiliser prices?

On the 22nd of February 2021, Trading View quoted gas at \$5.55 per MMBtu. Today, the 6th of December it is five times higher at \$29.62 per MMBtu. Fertiliser production is hugely reliant on natural gas and accounts for approximately 80% of the cost of ammonia, a key ingredient for calcium ammonium nitrate (CAN) and urea fertilisers.

Europe, which produces over 70% of the 15.6 million tonnes of CAN produced globally is heavily reliant on imports of natural gas which has driven the price of CAN to the highs we have seen in recent months.

N-P-K compound fertiliser prices are also at unprecedented levels on the back of strong muriate of potash (MOP) prices and reduced supply of di-ammonium Phosphate (DAP) and mono-ammonium phosphate (MAP). High MOP prices have partly been driven by political issues in Belarus which has resulted in some countries imposing sanctions against the import of potash from that country. Belarus accounts for 20% of the global 70.6 million tonnes of potash production. Exports of urea, DAP and MAP from China ceased on the 15th of October in an effort by that country to protect supplies for their own domestic market.

With gas price and political issues outside our control, it is important to look at the elements we can control for the coming fertiliser usage season. For example:

- Soil sampling
- Apply lime where required
- Targeting slurry and organic manure use
- Including Sulphur
- Use the FAI P&K Calculator

Soil sampling

During December and January it is advisable to [soil sample](#) your farm to find out what nutrients your land needs. The soil tests will identify the soil pH, phosphorus (P) and potassium (K) levels in each field. Create a nutrient management plan based on your soil results to guide organic manure applications and the fertiliser needs for the year ahead.

Apply lime where required

[Apply lime](#) where required according to the rates recommended by the soil test. Where soils are acidic (pH 5.5) it can result in a loss of up to 3 tonnes of DM per hectare or €543 in monetary terms (€181 per tonne DM X 3 = €543) on grassland farms due to only 77% of the nitrogen being utilised along with 48% of phosphorous and 77% of potash. See table 1.1.



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Table 1.1

pH impact on NPK usage efficiency at pH 5.5



Targeting slurry and organic manure use

You can increase the efficiency of slurry application by $\geq 50\%$ using a trailing shoe instead of a splash plate. 1,000 gallons of cattle slurry provides 9 units of N/acre versus 6 units of N/acre when using the traditional splash plate. Cool, damp conditions are best for applying slurry. Applying slurry in spring compared to summer increases the nitrogen availability by an additional 10%. The P & K value of cattle slurry are similar regardless of the method of application and account on average for 5 units of P and 32 units of K in cattle slurry. Slurry and other organic manure applications should be targeted towards fields with lower soil P and K levels (P and K Index 1 and 2) in order to maximise these nutrients.

Including sulphur

A 10% yield increase can be achieved when using a nitrogen plus sulphur fertiliser compared to a nitrogen only fertiliser which has the same N content. This equates to over 500kg DM/ha on a first cut silage crop. For grazed swards, apply 20 kg/ha or 16 units/acre of sulphur per year on a little and often basis starting in early spring. For silage swards apply 20 kg/ha or 16 units/acre of sulphur per cut.

Use the FAI P & K Calculator

The FAI have developed a P&K calculator in conjunction with Teagasc and K&S UK & Eire Ltd. The calculator estimates P and K fertilizer requirements for grassland and crops. By inputting details of crop yield, grassland stocking rate, concentrate feed usage, soil test results, and slurry application the calculator estimates chemical fertilizer P and K requirements. You can download the calculator as an app or use online by visiting <https://www.fertilizer-assoc.ie/p-k-calculator/>

It is difficult to say how long these high energy prices and sanctions on Belarus will last so it is important to assess all the elements within our control. By doing this we increase our nutrient use efficiency which is good for both our pocket and the environment.